APPENDIX-B TO

ENGINEERING REPORT

A PLAN FOR CLOSURE

SUBMITTED BY
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APRIL 1983

## 1.0 INTRODUCTION

Deutsch Relays, Inc. is a manufacturer of electronic relays and relay components. These components are cleaned, plated, surface treated and assembled. Hazardous wastes are generated at this facility by these processes. In accordance with 6NYCRR Part 360, this Closure Plan has been prepared and is submitted to New York State Dept.of Environmental Conservation as part of a complete application for a Permit to Construct and Operate a Hazardous Waste Management Facility. Deutsch Relays has scheduled start-up of a new plating shop and wastewater treatment system for September 1983 at their existing facility. Upon start-up of the new plating shop and treatment system, the old plating shop and treatment system will be closed. This Closure Plan describes the procedures necessary to close the facility including the old and new plating shops and wastewater treatment system, and estimates the costs involved in the closure. The cost for closing the existing plating shop and wastewater treatment system has been separately itemized in Table 1 of Section 5 in this report.

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## 2.0 IDENTIFICATION OF HAZARDOUS WASTE STORAGE

2.1 - The following list gives an estimate of the maximum inventory of waste in storage or in treatment at any one time at the facility. This inventory is for the existing facility prior to start-up of the new plating shop and wastewater treatment system in September 1983.

| | |
|---|---|
| A) Abandoned baths from the cleaning, plating and surface treating processes | 2100 gals. |
| B) Spent rinse baths from cleaning, plating and surface treating processes | 530 gals. |
| C) Wastewater from the cleaning, plating and surface treating processes (collection sumps) | 1000 gals. |
| D) Sludge generated from the chemical treatment of wastewater from the cleaning, plating and surface treating processes (in outdoor lagoon) | 6000 gals. |
| E) Drum storage (spent plating concentrates, waste oil, waste ammonia, waste freon) | 2200 gals. |

2.2 - The following lists give an estimate of the maximum inventory of waste in storage or in treatment at any one time at the facility after September 1983 after shut-down of the old plating shop and start-up of the new plating shop.

| | |
|---|---|
| A) Spent baths from the cleaning, plating and surface treating processes | 2100 gals. |
| B) Spent rinse baths from the cleaning, plating and surface treating processes | 530 gals. |
| C) Wastewater from the cleaning, plating and surface treating processes (collection sumps) | 1000 gals. |

D) Sludge generated from the chemical treatment of wastewater from the cleaning plating and surface treating processes (Sludge storage and Clarifier) 4000 gals.

E) Drum storage (spent plating concentrates, waste oil, waste ammonia, waste freon) 2200 gals.

## 3.0 PROCEDURES FOR CLOSURE

Closure of the Deutsch Relays, Inc. facility involves four major areas of concern. The first two areas are the plating room and the wastewater treatment system. In these areas, all equipment must be decontaminated and all waste must be disposed. The third area, drum storage, involves the removal of all hazardous waste stored, onsite, in drums. The fourth area, outdoor tank storage, involves the decontamination of outdoor tanks and related equipment.

## 3.1 PROCEDURES FOR CLOSURE OF EXISTING PLATING ROOM & WASTEWATER TREATMENT SYSTEM

Deutsch Relays has planned the start-up of a new plating shop and wastewater treatment system at their existing facility for September 1983. At that time, Deutsch Relays will close their existing plating shop and wastewater treatment system. The procedures below specify the manner in which these closure operations will be accomplished.

### 3.1.1 EXISTING PLATING ROOM CLOSURE

The plating room consists of plating tanks, plating equipment and related mechanical equipment. The plating tank solutions will be pumped into empty drums for temporary portable storage. The drums will be transferred to the new plating shop and the plating solutions will be reused. The rinse tank solutions and the neutralization solutions for the two (2) plating shop fume scrubbers will be drained to the existing wastewater treatment system for treatment and

discharge. All tanks will be cleaned by an industrial tank cleaning contractor. The industrial tank cleaning contractor will use a suitable solvent or detergent-water solution to clean the tanks, the floor and the collection trench. As much waste product as possible will be pumped from all pipelines. The pipes, pipe appurtenances and transfer pumps will be pressure cleaned by flushing with water. This washwater will be drained to the wastewater treatment system for treatment. After cleaning, the process tanks will be salvaged or disposed, depending upon condition.

### 3.1.2 EXISTING WASTEWATER TREATMENT SYSTEM CLOSURE

The existing wastewater treatment system consists of collection/treatment tanks, reagent storage tanks, an outdoor settling lagoon, an outdoor recharge sump and related equipment. After closure of the plating shop as described in Section 3.1.1, the contents of the treatment tanks will be batch treated and emptied by pumping to the settling lagoon. The tanks will be cleaned by an industrial tank cleaning contractor using a suitable solvent or detergent-water solution. The clear liquid contents in the settling lagoon will be decanted and pumped to the recharge sump for discharge. This liquid will be tested prior to discharge to ensure that groundwater standards have been met. The turbid sludge remaining in the lagoon will be removed and hauled away by a licensed scavenger. The treatment system piping will be emptied of as much waste as possible. The piping and all related appurtenances will be pressure-cleaned with water. The synthetic liner in the lagoon will

be washed by the industrial tank cleaning contractor, using a suitable detergent-water solution. The washwater will be pumped out of the lagoon for disposal and the liner will be removed and disposed. All wash and rinsewater generated by these closure operations will be removed and disposed by a licensed scavenger.

Once the decanted liquid pumped to the recharge sump has drained into the ground, any contaminated soil collected on the sump bottom will be scraped up and disposed by a licensed scavenger.

3.2 CLOSURE OF FUTURE PLATING ROOM

The closure procedure for the future plating room, which will be operational in September 1983, will be the same as those described for the existing plating room (see Section 3.1.1) except for two (2) items. Plating solutions will be pumped into empty portable drums and disposed by a licensed scavenger rather than reused. Also, there will be no fume scrubbers for the new plating room and therefore, there will be no scrubber neutralization solutions and tanks to be disposed.

out and transported off-site by a licensed scavenger. The tank will be cleaned by an industrial tank cleaning contractor, using a solvent or a suitable detergent-water solution. The contaminated washwater will be removed by the licensed scavenger. All outdoor underground tanks will remain intact for possible use by a future occupant.

3.4 DRUM REMOVAL

All drums, full, part full and empty, will be transported offsite by a licensed scavenger. All storage areas will be cleaned with suitable solvent or detergent-water solution until all waste residues are removed. All washwater and rinsewater generated from the closure operations will be removed by a licensed scavenger.

All waste removed during the closure operations will be manifested in accordance with RCRA regulations.

3.5 CLOSURE SCHEDULE

It is anticipated that all hazardous waste will be removed from the facility within 90-days of receiving the final volume of wastewater to be treated from the plating processes. Deutsch Relays, Inc. will complete closure within 180-days from this same date. This Closure Plan will be submitted to the Regional Administrator at least 180-days prior to commencement of closure procedures.

### 3.2.1 CLOSURE OF FUTURE WASTEWATER TREATMENT SYSTEM

The new wastewater treatment system, currently installed, consists of wastewater collection tanks and treatment tanks. There are three (3) outdoor, underground tanks: a Clarifier, Clearwell and Sludge Storage. Also, there are two leaching pools for discharge of treated wastewater effluent. The contents of the collection and treatment tanks will be pumped into drums for temporary storage or batch treatment. The supernatant liquid in the Clarifier and Clearwell tanks will be discharged to the leaching pools, after being tested for compliance with Groundwater Discharge Standards. Sludge in the Clarifier and the Sludge Storage tanks will be pumped out and hauled by a licensed scavenger. All tanks will be cleaned by an industrial tank cleaning contractor using a suitable solvent or a detergent-water solution. As much waste product as possible will be pumped from all pipelines. All piping, pumps and related appurtenances will be flushed with water. All contaminated wash and rinsewater generated by the closure operations will be removed by a licensed scavenger.

### 3.3 OUTDOOR HOLDING TANK

In addition to the outdoor tanks associated with the wastewater treatment system described in Section 3.2.1, there is an outdoor underground holding tank for untreated wastewater (acid-nitrogen) at this facility. Upon closure, the contents of the tank will be pumped

## 4.0 CERTIFICATION OF CLOSURE

When closure is complete, Deutsch Relays, Inc. will submit to the New York State Dept. of Environmental Conservation letters from Deutsch Relays, Inc. and an independent Professional Engineer certifying that the facility has been closed in accordance with the specifications of this Plan.

## 5.0 COST ESTIMATE FOR CLOSURE

The cost estimates which follow are computed on a "worst case" situation. This "worst case" cost estimate is in line with the method of cost estimating required by Para. 265.142 of the Resource Conservation and Recovery ACT (RCRA). As a result, it must be realized, however, that the closure cost estimates are high.

The cost estimate shown in Table 1 reflects the maximum cost associated with closure of the existing plating shop and wastewater treatment system. Table 2 is the closure cost estimate for entire facility after start-up of the "new" plating shop and wastewater treatment system. Prior closure of the "old" plating shop and wastewater treatment system is assumed in Table 2.

On an annual basis, the cost estimate will be revised by multiplying the estimate by a factor for inflation. The inflation factor will be calculated by dividing the latest published annual Implicit Price Deflator for Gross National Product by the deflator for the previous year (see Para.265.142 of RCRA).

TABLE 1 - CLOSURE COST ESTIMATE FOR EXISTING PLATING SHOP AND WASTEWATER TREATMENT SYSTEM

| ITEM | COST |
|---|---|
| 1) Removal and disposal of all hazardous materials from tanks, incl.labor & drums | $3,000 |
| 2) Tank Cleaning (including lagoon) incl.labor | 6,000 |
| 3) Sludge removal and disposal from lagoon | 6,000 |
| 4) Excavation, removal and disposal of solids from recharge sump | 5,180 |
| 5) Cleanup of floor and trench | 1,500 |
| 6) Pipeline and pipeline equipment cleaning | 2,000 |
| 7) Disposal of contaminated equipment | 2,000 |
| 8) Contingency Cost - 25% | 7,625 |
| 9) Administrative Cost - 15% | 5,719 |
| TOTAL COST | $43,844 |

TABLE 2- CLOSURE COST ESTIMATE FOR FACILITY (AFTER STARTUP OF NEW PLATING SHOP AND WASTEWATER TREATMENT SYSTEM)

| ITEM | COST |
|---|---|
| 1) Removal and disposal of all hazardous materials from tanks (process) | $10,000 |
| 2) Process Tank Cleaning | 10,000 |
| 3) Outdoor Tank Cleaning | 1,000 |
| 4) Sludge removal and disposal | 2,200 |
| 5) Pipeline and pipeline equipment cleaning | 3,000 |
| 6) Drum removal and disposal 40 drums at $65/per drum | 2,600 |
| 7) Cleanup of storage areas including plating room and wastewater treatment | 3,000 |
| 8) Disposal or salvage of contaminated equipment | 2,000 |
| 9) Contingency Cost | 8,450 |
| 10) Administrative Cost | 6,338 |
| TOTAL | $48,588 |

## 6.0 SURETY

Upon approval by New York State Dept. of Environmental Conservation of this Engineering Report and Permit Application, Deutsch Relays, Inc. will submit an acceptable form of surety or financial assurance to New York State Dept. of Environmental Conservation. The form of surety or financial assurance will be in accordance with the requirements of 40 CFR, Part 264-143, July 1982.

## 7.0 AMENDMENT TO CLOSURE PLAN

This Closure Plan will be amended whenever changes in operating plans or facility design affect the Plan. If a 6NYCRR 360 Permit modification is requested for changing the operating plans or facility design, the Closure Plan will be amended at the same time. If a 6NYCRR 360 Permit modification is not required, the Closure Plan will be amended within 60-days after the change in operating plans or facility design.